PETROLEUM WATCH
Transportation Energy Office
Fuels and Transportation Division
California Energy Commission

May 22, 2012

### Summary

As of May 21, retail regular-grade gasoline prices in California rose by 10 cents since the previous *Petroleum Watch* to \$4.34 per gallon, while retail diesel prices fell by 12 cents to \$4.30 per gallon. California retail gasoline prices are at record seasonal highs. The increase in gasoline prices is due to an unusual number of refinery outages. Retail diesel prices continue to move more moderately than gasoline prices and at time of publication are actually lower than gasoline prices.

California spot wholesale gasoline prices decreased 19 cents from a month ago to \$3.11 per gallon, a 5.7 percent fall. Prices experienced a significant spike and subsequent decline response to refinery maintenance. Wholesale diesel fell 18 cents to \$3.02 in response to declining crude oil prices.

Refinery production of California-compliant gasoline and diesel in California fell by 13.9 percent and 19 percent in the past week, respectively. Inventories of California-compliant gasoline and diesel also decreased in the past week, by 3.8 percent and 16.8 percent, respectively. Recent refinery maintenance has contributed to declining production and inventories.

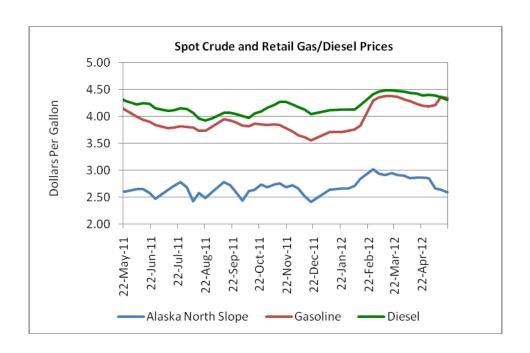
A decrease in world crude oil prices put downward pressure on prices over the past month. Brent oil prices have fallen to \$112.24 per barrel while West Texas Intermediate (WTI) prices have fallen to \$93.97 per barrel. As of May 15, Alaska North Slope (ANS) crude oil prices fell to \$109.88, \$8.89 lower than a month ago.

## Comparisons of Diesel, Gasoline, and Crude Oil Price Changes

In January and early February 2012, retail gasoline and diesel prices increased relatively slowly. These increases accelerated in late February 2012 before leveling off in March. In early April, prices slowly began to decline. As of May 21, ANS prices reached \$2.59 per gallon, gasoline prices were \$4.34 per gallon, and diesel prices were \$4.30 per gallon.

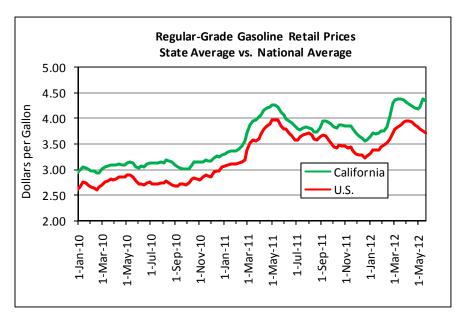
Gasoline, ANS, and diesel prices are 63 cents higher, 5 cents lower, and 19 cents per gallon higher, respectively, compared to January 9, 2012. Rising crude oil prices pushed both gasoline and diesel prices up in March; however, gasoline prices increased more than diesel due to refinery outages and the transition from winter to summer blend gasoline. Crude oil prices have declined over the past two months. These declines have begun to pass through to diesel prices, but multiple refinery shutdowns for maintenance have kept gasoline prices high despite decreasing crude oil prices. As a result, gasoline prices exceed diesel prices for the first time since July 26, 2010.

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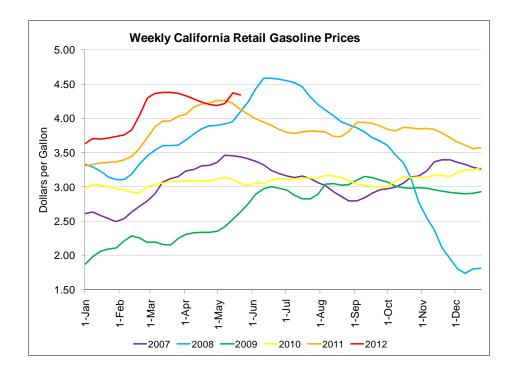


### Retail Prices

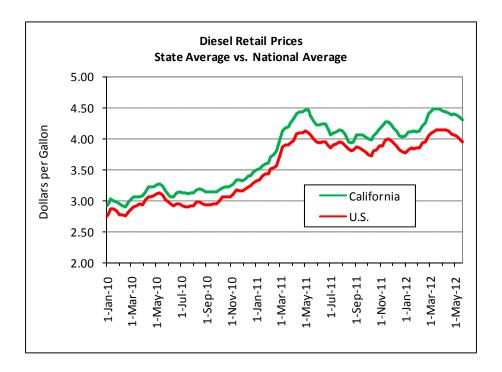
The average California **retail price for regular-grade gasoline** increased 10 cents over the past month, rising to \$4.34 per gallon, and is 22 cents higher than this time last year. Nevertheless, average U.S. retail gasoline prices decreased 21 cents from a month ago to \$3.71. Average U.S. gasoline prices are 14 cents less than a year ago. The difference between California and U.S. retail gasoline prices almost doubled to 63 cents over the past month, which is 32 cents above the 2009-2011 average of 31 cents per gallon. Retail prices followed wholesale prices higher, but have only begun to follow them back down. California prices increased while national prices decreased due to a sizable number of California refinery outages.



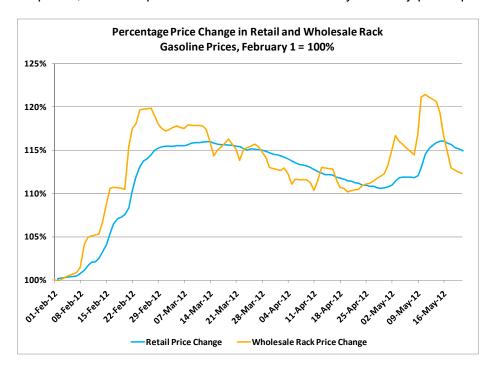
After remaining at all-time seasonal highs during 2012, California retail prices briefly dipped below 2011 prices before turning up again in mid-May. Although the next two or three weeks are often seasonally strong, the supply reduction seen following the Cherry Point refinery fire in Washington seems to have been at least partially dissipated. Current prices could fall quite a bit and still remain above the 2011 level.



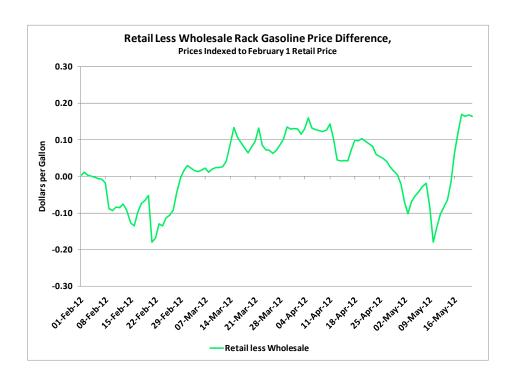
The average California **retail diesel price** fell 12 cents over the past month to \$4.30 per gallon. The average U.S. retail diesel price fell 17 cents over the past month, to \$3.96 per gallon. As a result, the premium for California diesel over U.S. diesel prices increased 5 cents to 34 cents over the past month. California diesel prices are 2 cents higher than a year ago, and U.S. prices are 4 cents lower. Diesel prices continue to be less volatile than gasoline prices since the highs of May 2011.



As seen below, retail price changes tend to lag wholesale price changes, which is clearly seen in the recent price increase that began in mid to late April. Retail prices tend to be less volatile than wholesale prices, which is quite visible in both the February and May price spikes.



Although it cannot be said with certainty that retailers lose money during such price spikes, they certainly earn less per gallon sold, as occurred in late February and early May, when the retail price dipped below the adjusted wholesale price.

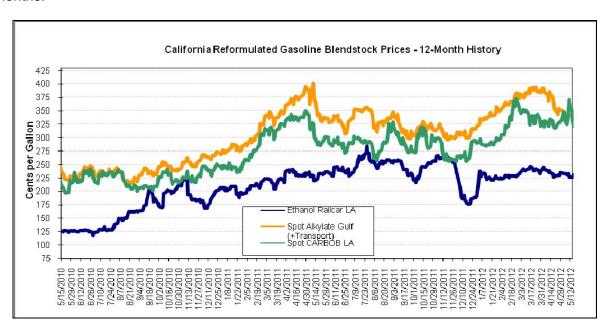


# Wholesale Gasoline and Blendstock Prices on May 16

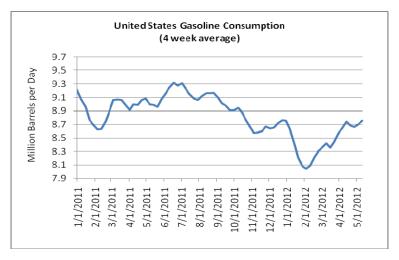
California spot wholesale gasoline prices for regular-grade reformulated blendstock for oxygenate blending (RBOB) fell to \$3.15 per gallon, 19 cents lower than a month ago and a 12 cent decrease over the same time a year ago. Prices in New York saw a larger decline, down 34 cents over the month and 27 cents over the year. California experienced a roller-coaster month, spiking some 25 cents over a week beginning May 10 in response to low inventory and reports of extended refinery turnarounds, including a delay in the restart of the Cherry Point refinery in Washington State which has been down for since February due to a fire.

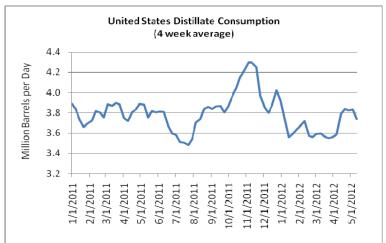
California average spot wholesale ultra-low-sulfur diesel prices stood at \$3.02 a drop of 7 cents in the past week and down 18 cents from a month ago.

The average representative estimated cost of **fuel ethanol** to California refiners and marketers fell 9 cents to \$2.32 per gallon as of May 16, 2012. Wholesale gasoline price declines at the national level put downward pressure on prices while corn price increases have put upward pressure on prices. Overall, ethanol prices have remained relatively flat over the past five months.



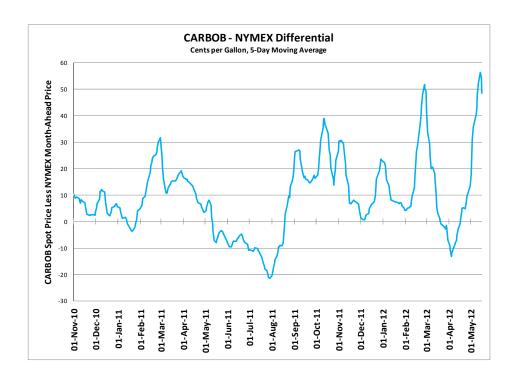
The Energy Information Administration's (EIA) weekly report for the week ending May 11 shows that U.S. gasoline consumption increased 1.2 percent while distillate consumption fell 7.8 percent from the previous week. The four-week average consumption for gasoline is 8.8 million barrels per day, a decrease of 2.6 percent from the four-week average the same time a year ago. The four-week average for U.S. distillate consumption is 3.7 million barrels per day, 0.5 percent less than the same period a year ago. Although falling average US gasoline prices and seasonal factors such as the summer driving season have pushed gasoline demand up, consumption levels remain low in comparison to previous years.



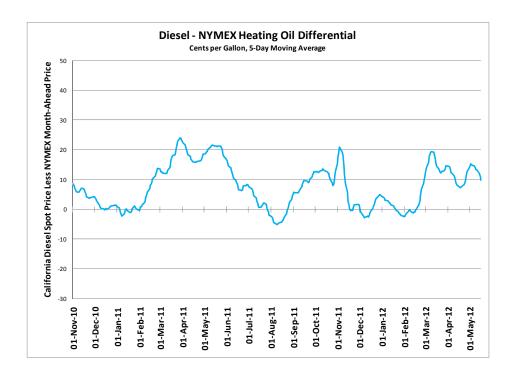


# Futures-Spot Market Spread<sup>3</sup>

As of May 16, the spot market price for California gasoline showed a 49 cent premium to the New York Mercantile Exchange (NYMEX) one-month-ahead futures price, using five-day moving averages. This is an astonishing increase from the 13 cent discount of April 4, all the more so since this move comes on the heels of the 65 cent decline that occurred between February 27 and April 4. Since the April *Petroleum Watch* this premium rapidly rose due to California refinery outages. Since late February California and NYMEX prices have moved in opposite directions due to transitions from winter to summer blend and refinery outages, both planned and unplanned. Volatility has increased since last month's high level, with the past six weeks seeing the greatest changes in the spread since the December 2005 to May 2006 period.

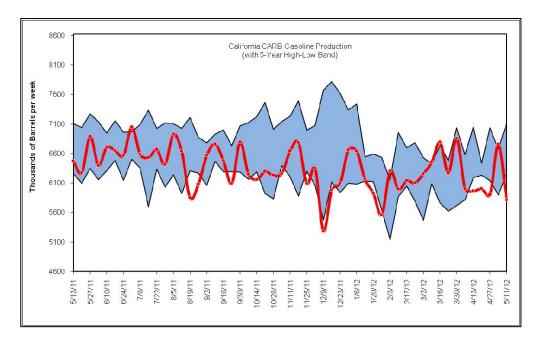


As of May 16, California diesel sold at a premium of 10 cents to the NYMEX heating oil one-month ahead futures price—using five-day moving averages—the same level seen in the April *Petroleum Watch*, and slightly above the two-year average premium of 8 cents. For nearly three months now, California diesel prices and NYMEX one-month-ahead prices have maintained a 10 to 20 cent differential while their daily price movements have been in similar directions. The differential for California diesel continues to be remarkably moderate compared to the gasoline market.

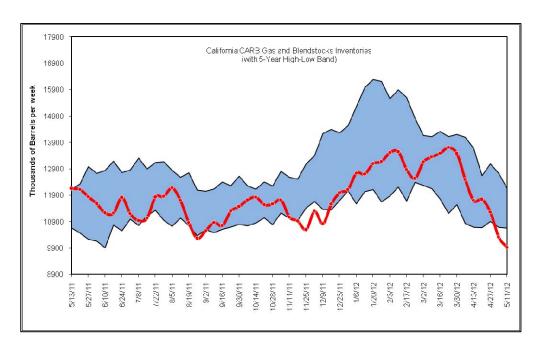


# Refinery Production and Inventories

**Reformulated gasoline production** in California for the week ending May 11 decreased 13.9 percent from the previous week to 5.8 million barrels, falling below the bottom of the five-year range. Some California refineries, especially in Northern California, have been undergoing planned maintenance, which has contributed to decreases in reformulated gasoline and diesel production. <sup>4</sup>

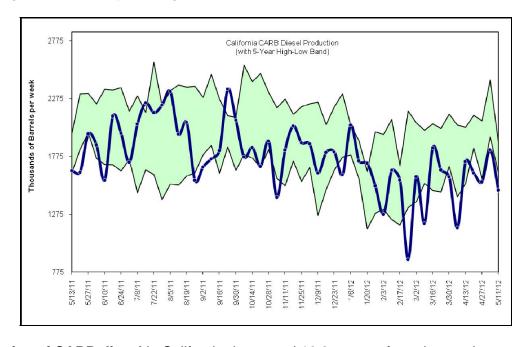


California **reformulated gasoline inventories** decreased 2.7 percent from the past week, while gasoline blendstock inventories decreased 4.7 percent. California's combined inventories of reformulated gasoline and gasoline blendstocks decreased 3.8 percent to 9.9 million barrels, falling further below the five-year range. Since late March, combined inventories have fallen 28 percent due in part to planned and unplanned refinery maintenance in Washington state and California.

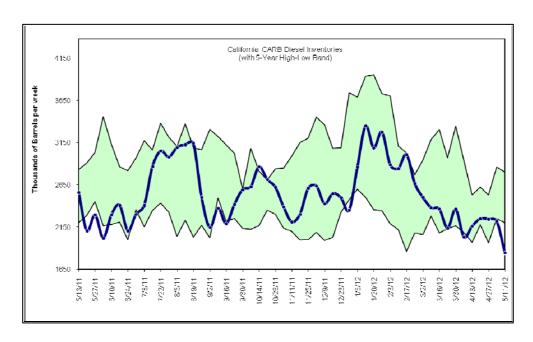


For the United States, gasoline inventories as of May 11 decreased to 204.3 million barrels, 2.8 million barrels less than the previous week. Inventories decreased by 49,000 barrels on the West Coast, 0.51 million barrels on the East Coast, and 0.86 million barrels on the Gulf Coast. The decline in West Coast inventories mirrors the trend for California inventories.

California-compliant **ultra-low-sulfur diesel fuel (CARB diesel) production**<sup>5</sup> was 1.5 million barrels during the week ending on May 11, a decrease of 19.0 percent from the previous week, remaining below the five-year range.



**Inventories of CARB diesel** in California decreased 16.8 percent from the previous week to 1.8 million barrels, falling well below the five-year range, and to the lowest level since early November 2005. Inventories have fallen 45 percent since mid January.



U.S. distillate inventories as of May 11 fell to 119.8 million barrels, 0.97 million barrels less than the previous week. Inventories increased by 83,000 barrels on the East Coast and 0.92 million barrels on the Gulf Coast but fell by 0.80 million barrels on the West Coast.

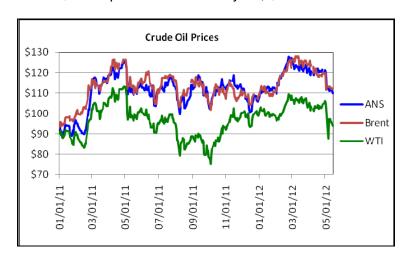
### Crude Oil Prices and Associated Factors

West Coast prices for ANS crude oil, a refinery feedstock for California, fell to \$109.88 as of May 15. Prices have fallen \$8.89 since the previous *Petroleum Watch* but are 26 cents higher than a year ago. ANS crude oil price changes are influenced by inventory levels, refinery capacity, domestic and international economic conditions, currency exchange rates, perceived risks to global supply such as unrest in the Middle East, and near-term price trends as indicated by the futures market for crude oil. Iran has agreed to resume negotiations with regard to its nuclear program, easing geopolitical tensions. Renewed concerns about European debt and increased inventories have also pushed prices down.

### **Recent Trends in Crude Oil Prices**

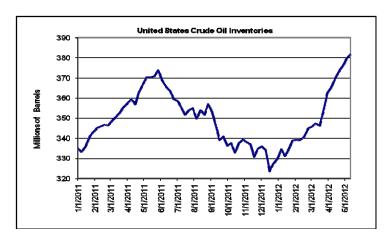
			Change From	Directional Contributing Factor		
	April 2012	May 2012	Previous Month	Upward	Downward	Unchanged
ANS Crude Oil Price (U.S. Dollars /Barrel)	\$118.77	\$109.88	Down 7.5%			•
Europe Brent Crude Oil Price (U.S. Dollars/Barrel)	\$110.77	\$109.88	Down 7.9%			
West Texes Intermediate, Cushing Oil Price (U.S. Dollars/Barrel)	\$101.12	\$93.97	Down 7.1%			
U.S. Crude Oil Inventories (MM Barrels)	365.2	381.6	Up 4.5%		<b>\</b>	
S&P 500	1,359	1,331	Down 2.1%		No. of the last of	
EURO STOXX 50 Price	2,371	2,311	Down 2.5%			
Total Dollar Index	79.8	81.2	Up 1.8%			
European Debt Problems						<b>/</b>
Disruption in Oil Exports						<b>&gt;</b>

The spread between West Texas Intermediate crude oil prices and the Brent crude oil contracts remains wide, averaging \$16.57 since the last *Petroleum Watch*. West Texas Intermediate-NYMEX futures traded at \$93.97 per barrel as of May 15, \$15.91 less than ANS crude oil.



A major reason for the divergence between Brent and WTI crude oil prices this year is the increased production of shale oil from the Bakken formation in North Dakota. A combination of increased rail transportation<sup>7</sup>, barge shipments, and planned pipeline reversals has eased transportation problems. Nevertheless, North Dakota oil production is increasing more quickly than oil transportation infrastructure in that region, which has led to increased inventories and lower WTI prices relative to Brent.

U.S. crude oil inventories have increased over the past week. As of May 11, U.S. commercial crude oil inventories rose by 2.1 million barrels from the previous week to 381.6 million barrels, the highest since 1990. U.S. crude oil inventory increases have been driven by oil inventory increases in Cushing, Oklahoma. Crude oil stocks are 11.3 million barrels more than a year ago and 27.3 million barrels more than the five-year average for this date. California crude oil stocks rose 1.6 percent from the previous week to 16.8 million barrels but are 3.3 percent less than a year ago.



<sup>1</sup> Retail gasoline and diesel prices and U.S. crude oil and product inventory estimates are from the Energy Information Administration of the U.S. Department of Energy.

<sup>&</sup>lt;sup>2</sup> Ethanol railcar prices are from *Platts Oilgram* and are average prices for prompt Southern California shipments minus a 45¢/gal federal excise tax credit for 2009 through 2011 prices and a 51¢/gal federal excise tax credit for prices prior to 2009. The federal excise tax credit expired at the end of 2011. California alkylate prices are also calculated from Platts Oilgram and include a 20¢/gal transportation and distribution cost from Gulf Coast to California. Spot wholesale prices for regular-grade California reformulated gasoline blendstock for oxygenate blending (CARBOB) are from Oil Price Information Service.

<sup>&</sup>lt;sup>3</sup> A higher spread between the state's spot fuel prices and the New York Mercantile Exchange (NYMEX) futures price indicates supplies are tighter in California, and a lower spread indicates the market is relatively well-supplied compared to the rest of the country. The NYMEX futures price reflects the national market, while California Reformulated Gasoline Blendstock for Oxygenate Blending (CARBOB) is a gasoline blend unique to California and is usually sold at a premium to the NYMEX price.

<sup>&</sup>lt;sup>4</sup> California refinery production and inventory information is from the Petroleum Industry Information Reporting Act (PIIRA) database maintained by the California Energy Commission.

<sup>&</sup>lt;sup>5</sup> Staff has discontinued the reporting of combined CARB and EPA diesel production and inventories and will report only CARB diesel as of December 2009. EPA diesel is primarily for export from California.

<sup>&</sup>lt;sup>6</sup> Alaska North Slope (ANS) crude oil prices are from *The Wall Street Journal*. Brent and West Texas Intermediate (WTI) crude oil prices are from the Energy Information Administration.

<sup>&</sup>lt;sup>7</sup> Oil Rail transportation estimates are obtained from the Energy Information Administration of the U.S. Department of Energy and the American Association of Railroads